



Docket No.: 1344.1021

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

Hideyuki MIYATA, et al.

Serial No. 09/272,404

Group Art Unit: 2633

Confirmation No. 5584

Filed: March 19, 1999

Examiner: Agustin Bello

For: OPTICAL TRANSMISSION APPARATUS AND METHOD WHICH ADJUST RISE AND FALL TIME OF SIGNAL LIGHT TO BE TRANSMITTED

REPLY BRIEF

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

This Reply Brief is filed in response to the Examiner's Answer mailed January 12, 2004.

I. Grouping of Claims

The argument section of the Appeal Brief indicated specific groups of claims, and the arguments in the Appeal Brief were organized around the specific groups. However, based on the Examiner's comments in the Examiner's Answer, it appears that the grouping of claims may not be clear.

Therefore, to clarify the grouping of claims, it is respectfully submitted that the claims DO NOT stand or fall together. Instead, in accordance with the groups of claims as discussed in the Appeal Brief, it is respectfully submitted that the claims should be grouped as follows:

Claims 1, 5, 7-8, 11-14 and 16-17, 19-20, 22-27 and 33 should be grouped together, as they relate to adjusting at least one of a rise time and a fall time of an electrical modulation signal, and modulating a light with the adjusted electrical modulation signal.

Claims 28-29, 31-32, 35 and 37 should be grouped together, as they relate to adjusting at least one of a rise time and a fall time of a "modulation signal". This recitation is different than

the recitation of an "electrical modulation signal" of, for example, claim 16 in the previous group.

Claims 6 and 18 should be grouped together, as they relate to lengthening both the rise time and the fall time.

Claims 38, 39 and 15 should be grouped together, as they relate to wavelength division multiplexed (WDM) light.

II. ARGUMENT

In addition to the arguments in the Appeal Brief, the following additional arguments are submitted.

* * *

It was argued in the Appeal Brief that Clow does not include any disclosure indicating that a carrier or modulator is involved. In view of the Examiner's comments in the Examiner's Answer, and a further review of Clow, it appears that Clow relates to the use of a carrier or modulator. For example, column 5, lines 50-55, of Clow, indicate that information can be transmitted between devices using voltage modulation, current modulation or pulse width modulation.

However, it is respectfully submitted that, in Clow, the rise/fall times of the modulated carrier signal, but NOT an information signal which is modulated on the carrier, are adjusted. For example, the drive waveform 30a shown in FIG. 2 of Clow shows a rise time 30a-2 and a fall time 30a-2 which can be adjusted. However, the rise time 30a-2 and fall time 30a-2 in FIG. 2 of Clow are for the modulated carrier signal, or drive waveform 30a. The rise time 30a-2 and fall time 30a-2 in FIG. 2 of Clow are NOT the rise/fall times of an information signal modulated on the carrier.

* * *

More specifically, in the present invention as recited, for example, in independent claim 16, an adjusting circuit adjusts at least one of a rise time and a fall time of an "electrical modulation signal". As recited, for example, in claim 16, a modulator modulates a light with the adjusted electrical modulation signal. See, for example, FIG. 1 and the corresponding disclosure on page 7, line 4, through page 10, line 3, of the specification; and FIG. 10 and the corresponding disclosure on page 18, line 27, through page 19, line 22, of the specification. See especially the operation of adjusting circuit 13 and modulator 14 in FIGS. 1, 8 and 10.

Clow does not adjust an electrical modulation signal used to modulate a light. On the contrary, in Clow, a transmitted "drive waveform", or modulated carrier, is directly adjusted. For example, FIGS. 2 and 3 of Clow show a square-wave shaped drive waveform 30a, which is a modulated carrier. Clow directly adjusts this transmitted, square-wave shaped drive waveform. See, for example, column 4, lines 36-50, of Clow. It is respectfully submitted that no portion of Clow discloses or suggests any type of information signal being adjusted before being used to modulate a drive waveform.

Therefore, the present invention adjusts an electrical modulation signal which is used to modulate a light. On the contrary, Clow directly adjusts a transmitted drive waveform, or modulated carrier. Therefore, the present invention as recited, for example, in claim 16, is significantly different than Clow.

As argued in the Appeal Brief, Clow should not be combined with Marcuse. However, for the sake of argument, if Clow was combined with Marcuse, such combination should only occur for embodiments in Clow which are consistent with those in Marcuse. More specifically, as discussed above, Clow directly adjusts a transmitted drive waveform. Therefore, Clow should only be combined with Marcuse to directly adjust the transmitted drive waveform. It is respectfully submitted that such a combination would not disclose or suggest the present invention as recited, for example, in claim 16, where the "electrical modulation signal" is adjusted.

* * *

Claims 38, 39 and 15 relate to wavelength division multiplexed (WDM) light.

Clow is directed to "supervisory systems", such as smoke and fire detection systems. See, for example, column 4, lines 15-22; and column 6, lines 13-23, of Clow. In addition to the arguments in the Appeal Brief, please note that such "supervisory systems" of Clow would transmit a relatively low amount of data, and would not employ wavelength division multiplexing.

* * *

Claims 6 and 18 relate to lengthening both the rise time and the fall time. In the Examiner's Answer, the Examiner asserts that it would be obvious to combine any lengthening of rise and fall times in Clow with Marcuse. However, the Applicants would like to emphasize a belief that claims 6 and 18 should be allowable.

More specifically, Marcuse simply discloses that rising and falling times can be REDUCED. Moreover, Marcuse is specifically directed to reducing modulator chirp. For this

purpose, the rise and fall times must be reduced, as described in Marcuse. If the rise time and/or fall time were lengthened, it is respectfully submitted that such operation would increase modulator chirp. Therefore, the lengthening of the rise time and fall time would be contrary to Marcuse. Accordingly, it is respectfully submitted that any lengthening in Clow should not be combined with Marcuse, as such lengthening would be contrary to Marcuse.

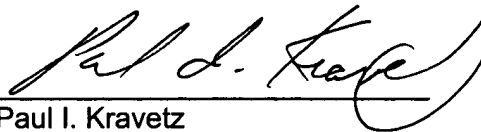
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In view of the above, it is respectfully submitted that the claims are allowable over the cited references.

Respectfully submitted,

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